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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/534,097 | 03/23/2000 | Shuichi Shimizu | JA998-036X | 9099 |

7590 01/21/2005
Thomas A Beck Esq
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New Milford, CT 06776

| EXAMINER |
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TRUONG, THANHNGA B

| ART UNIT | PAPER NUMBER |
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2135

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 09/534,097 | Applicant(s) SHIMIZU ET AL. | |
| | Examiner Thanhnga B. Truong | Art Unit 2135 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/08/2004 (Amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9, 11, 12, 14-17, 20 and 21 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10, 13 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 10, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 6,163,842), and further in view of Vynne et al (US 5,960,081).

a. Referring to claim 1:

i. Barton teaches:

(1) means for preparing information to be embedded as bits in a bit stream [**i.e., an authentication system for digital information in which data are embedded in a bit stream, whereby the embedding process is shown in Figure 1 (column 4, line 55)]**;

(2) means for inverting each bit in means for alternating the sign of said bit stream in accordance with a sign inversion cycle [**i.e., modifying an original bit stream, that is for "alternating the signs of said bit stream". Accordingly, precise reconstruction of the original bit stream requires the inclusion within the bit stream of an accurate record of the bits before modification (column 4, lines 56-59)]**; and

(3) means for embedding said bit stream in said frames [**i.e., embedded the resulting bit string into the data block 20 in Figure 1, that is "frames" (column 6, line 33)]**.

ii. Although Barton does not clearly and explicitly mention the inversion of bits, Vynne et al teaches:

(1) In practice, if the same B.R.S. could be generated at the embedding time and at the retrieving time, then a partly correct signature could be

embedded by coding only whether the B.R.S. should be inverted or not. Let a '1' signify an inversion, and '0' signify no inversion (column 23, lines 36-40).

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) clearly mention the inversion of bits in Barton's watermark system for protecting the ownership of video or image authors (column 1, lines 43-44 of Vynne).

iv. The ordinary skilled person would have been motivated to:

(1) clearly mention the inversion of bits in Barton's watermark system since the signature information can be hidden, not only to make it visually imperceptible, but also to make it difficult to remove, and thus resistant to hackers (column 2, lines 15-18 of Vynne).

b. Referring to claim 2:

i. Barton further teaches:

(1) the motion picture electronic watermark system according to claim 1, wherein said means (2) includes means for adding sign bits to said bit stream [i.e., **assume the use of Lempel-Ziv compression to achieve a 2:1 compression ratio of the original bits from the image. This adds an additional 562 bits of data to be embedded (column 8, lines 65-67 through column 9, line 1)]**].

c. Referring to claim 10:

i. This claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

d. Referring to claim 13:

i. This claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

e. Referring to claim 19:

i. This claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

Allowable Subject Matter

3. Claims 3-9, 11-12, 14-17, 20-21 are allowed.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

TBT

January 13, 2005


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100